

# Research Paper: The Effectiveness of Training Emotional Regulation Skills in Reducing Addiction Ability in Male High School Students



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## ABSTRACT

**Background:** Emotional adjustment skills have recently been proposed as a new framework in the prevention of addiction in students. The purpose of this study was to determine the effectiveness of training emotional regulation skills on reducing addiction ability in high school male students.

**Methods:** The statistical population of the present quasi-experimental study with a pre-test, post-test design and a control group was male high school students in Tabriz District 3 in the academic year 2018-2019. Accordingly, using the cluster sampling method, the students of one school were selected as the statistical sample and those with higher than the average score (above 21) were selected randomly and divided into the experimental (n=25) and control (n=25) groups. The experimental group was subjected to Emotional regulation skills training for 8 sessions, each session lasting 90 minutes for two months. During this period, the control group received no intervention. Theoretical Addiction Questionnaire was used for data collection. Covariance analysis was used to analyze the results.

**Results:** Data analysis showed that training of emotional regulation skills has an impact on reducing the addiction of talented students.

**Conclusion:** Training emotional regulation skills has an impact on reducing the addiction of talented students. emotion regulation skills training can also be used as a coping approach in adolescent education that should be targeted by reference groups, such as counselors, school coaches, and social planners.

## 1. Introduction

**M**ental illness is a major and widespread global problem that includes depression, aggressive behaviors, low emotions, and substance abuse. Approxi-

mately, more than 20% of adolescents experience mental health problems during education. More than 7 to 10% of people with these problems suffer from clinical symptoms of mental disorders. More than half of these adolescents with mental illness and substance abuse have no access to health and psychological services [1], and these

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adolescents face several educational and communication problems, leading to high-risk behaviors.

The Theory of Addiction Ability defines unhealthy developmental issues, as important factors leading to addiction. According to this theory, like other diseases, individuals' susceptibility to drug abuse varies from person to person. However, generally speaking, the more a person is exposed to risk factors, the more likely they are engaged in substance abuse behaviors. On the other hand, protective factors reduce the likelihood of addiction. Early life events alter the biological traits and making adolescents and adults vulnerable to addiction. Different situations can make people more susceptible to drug abuse behavior. These preparations include psychological problems or persistent psychological stress in an individual's life [2]. It also explains how some people are more susceptible to addiction and can become addicted if exposed. For example, people who experience adverse events, such as parental loss, low parental support, emotional inattention, isolation, and inappropriate dependence are at increased risk of substance use disorder. Drug use is one of the most important health issues in Iran. The decrease in the average age of addiction and the increasing tendency of youth and adolescents to abuse the substance that underlies the speed of transmission and expansion of the addiction phenomenon are considerable [3].

Numerous studies have shown that the early onset of drug use in adolescence can cause cognitive and emotional problems for these individuals, and because response inhibition is developed during this period, this slower emotional maturation may be responsible for increased drug use [4]. In the etiology of drug addiction, various researchers and theorists have also identified emotion regulation deficits, low levels of discomfort, and emotional avoidance [5]. Emotional experiences, regardless of their positive or negative capacities, are considered to be key elements in the adaptation. According to reports, emotion is one of the factors that is more widely considered in the pathology of a wide range of disorders, especially in the field of addiction and in particular, its management with a mediation role, which is known as emotion regulation [6]. Emotion regulation refers to a wide range of biological, social, and behavioral processes [7], whereby individuals feel the emotions they possess, and they know how they perceive and how they experience and manifest their emotions. An individual may regulate his or her emotions automatically or affect them unconsciously [6]. Emotion regulation is considered as processes and strategies, such as reappraisal, rumination, self-expression, avoidance, and inhibition, through which individuals modulate their emotions to respond to alert and unconscious environmen-

tal expectations [8]. Aldao et al. [8] consider six methods of emotion regulation as follows: acceptance, avoidance, problem-solving, evaluation, rumination, and repression. The acceptance of what is often considered mindfulness is the awareness of each thought simply, without details, and without judgment. In this regard, thoughts and feelings are accepted as they are. Avoidance refers to actively and consciously avoiding situations and experiences.

Problem-solving is a conscious effort to change a stressful situation or avoid its consequences. Reassessment is the creation of positive or neutral interpretations to reduce negative stress in stressful situations. Rumination is the focus on thoughts, emotions, and experiences as well as their causes and consequences. Repression involves trying to reduce or prevent the expression of emotion or the mental experience of emotion. Effective emotion management reduces the risk of addiction when one is pressured by environmental factors to consume drugs. Conversely, the ability to manage emotions enables people to use appropriate coping strategies in situations where the risk of substance abuse is high [9]. People with high emotion regulation are better able to predict others' desires and understand others' unwanted pressures and better control their emotions. As a result, they are more resistant to drug use [10].

Several empirical studies have been done considering this issue. In their research, Copello et al. [11] concluded that a lack of emotion regulation skills can lead to problems, such as drug abuse. Aazam et al. [12] have shown in their research that cognitive emotion regulation strategies lead to a decrease in emotion-seeking in drug-dependent individuals and result in drug withdrawal. The findings of the study by Di Pierro et al. [13] confirm that there is a relationship between emotion regulation skills and the tendency to addiction and emotion was one of the reasons for the tendency to addiction. Using a meta-analysis, Dehghani and Mesrabadi [14] showed that in general, social and emotional skills training reduces addiction in learners.

According to the theoretical and empirical evidence mentioned above, drug use is currently a widespread problem in the world across all ethnic and class groups of society, especially in adolescents and young people. Although several studies have been done to confirm the role of emotion regulation in drug users, few studies are available on interventional programs and investigating these structures in non-drug users, especially adolescent learners who are more likely to be addicted. In general, this study was done to investigate the effect of emotion regulation skills training on the reduction of addiction readiness of high school students and indicate to what extent these teachings reduce the addiction of students. There-

fore, the purpose of the present study was to investigate the effectiveness of emotion regulation skills training on reducing the addiction potential of high school-aged learners.

## 2. Methods

This research was based on purpose, hypothesis, and application with a quasi-experimental design using pre-test and post-test approach and control and random replacement groups. The statistical population of the study consisted of male high school students in Tabriz District No. 3 in the academic year 2018-2019. From this population, 50 students were selected through the cluster sampling method and examined. In this regard, one high school was selected randomly from one of the secondary schools, and 217 students were tested for addiction and the results were scored. Students who scored higher than the mean (score 21) on the addiction test were identified. In the next step, 50 talented students were randomly divided into the experimental and control groups. The experimental group was trained using the Gross Model emotion regulation program for eight 90-min sessions for two months. The inclusion criteria were the diagnosis of susceptibility to addiction and male gender and the exclusion criteria were the use of psychiatric judges or the diagnosis of other psychotic disorders.

The following tools were used for data collection:

**Addiction Questionnaire:** The Addiction Questionnaire was used to measure attitude toward addiction [15] with 32 items scoring on a 5-point Likert scale ranging from strongly agree to strongly disagree. Scoring favor-

able items or positive attitudes toward addiction ranged from 5 to 1 (strongly agree, agree, Neutral, disagree, and strongly disagree), and negative attitudes toward addiction are scored reversely. The minimum and maximum scores were 32 and 160, respectively. Internal consistency for the questionnaire based on Cronbach's alpha coefficient was reported to be 0.89 [15].

**Emotion Regulation Skill Intervention:** Emotion regulation skills intervention was conducted based on the Grasse model in the experimental group for eight 90-min sessions for two months. Training sessions include introducing students to emotional adjustment and grouping skills, training of self-awareness cognitive skills, training of your own and others' emotion recognition skills, training of emotion control skills, accepting positive and negative emotions, and re-evaluating and expressing them. These sessions were designed to teach introducing and defining each skill and practicing the previous sessions and providing clear examples to learn more about each skill. Various scientific sources were utilized to design this intervention program. A summary of the emotion regulation training protocol for male students with addiction susceptibility is presented in Table 1. To analyze the data, the statistical method of analysis of covariance and SPSS V. 21 software were used.

## 3. Results

The subjects were male high school students aged 12 to 16 years. Descriptive statistics of the studied variables are presented in Tables 2 and 3, respectively.

**Table 1.** Summary of the emotional adjustment training protocol for male students

Sessions	Explanations
1	Introducing the group members to each other, explaining the logic and stages of the intervention, the necessity of emotion regulation and learning, an overview of the primary and secondary emotions, and the framework and rules for participating in the group
2	Recognizing emotions and motivating situations through learning the functional differences of different types of emotions
3	Assessing the vulnerability and emotional skills of the members
4	Making emotional change and interpersonal skills training (conversation, and conflict resolution)
5	Teaching how to change attitudes and stop rumination
6	Identifying false assessments and their effects on emotional behaviors, modifying cognitive assessments, and re-assessment of strategy training
7	Identifying the level and how to use the inhibition strategy and evaluating its emotional consequences, exposure, emotional exercise training, behavior modification through enhanced environmental change, emotional discharge training, relaxation, and reverse action
8	Preventing social isolation and avoidance, problem-solving training, reassessment, and barriers to use



**Table 2.** Mean and standard deviation of attitude toward addiction in the experimental and control groups

Group	Stage	Mean±SD
Experimental	Pre-test	24.72±5.12
	Post-test	22.50±5.41
Control	Pre-test	27.36±3.68
	Post-test	25.24±3.44

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The mean and standard deviation of the attitude toward addiction in the experimental group decreased compared with the control group after training or intervention (Table 2). The Kolmogorov-Smirnov test was used to check the normality of the distribution of variables. The results are shown in Table 3.

The results showed that the distribution of pre-test and post-test addiction scores of the control and experimental groups was not significantly different from the normal distribution. Also, Levene's test was used to investigate the homogeneity of variances (Table 4).

Based on Levene's test results and the lack of a significant difference for risk of addiction between pre-test and post-test, the groups were homogeneous. Therefore, because the analysis of covariance was used and the results are shown in Table 5.

According to the results of Table 5 ( $F=289.383$ ,  $df=1$ ,  $P=0.001$ ), after adjustment for the pre-test effect, the difference between the groups was significant at the significance level of 95%. Therefore, it can be concluded

that emotion regulation training was effective in reducing the addiction of high school male students. Also, the Chi-square test indicated that 88% of the changes in the experimental group's addiction scores (post-test group differences) were due to the independent variable.

#### 4. Discussion

The results showed that emotion regulation training can reduce the risk of addiction in the learners. Teaching emotion regulation skills can reduce the risk of addiction the following ways: learning how to identify, recognize, and distinguish emotions, having emotional self-awareness and self-esteem, revising and re-examining emotions, enhancement of a sense of self-worth (self-esteem), control and management of pleasant and unpleasant emotions, acquiring active empathy to help build new relationships and maintain effective relationships, learning how to control impulsive behavior and anger, understanding situations causing harmful emotions, developing self-efficacy (problem-solving, decision-making, and responsibility), understanding how to comply with the condition of new excitement, management

**Table 3.** Kolmogorov-Smirnov test results to check for normality of the data

Result	Experimental Group		Control Group	
	Pre-test	Post-test	Pre-test	Post-test
Kolmogorov – Smirnov test	0.788	0.836	0.625	0.556
Significance level	0.564	0.487	0.830	0.917

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**Table 4.** Levene's test for homogeneity of variances

Variable	Stage	Levene's Test	df1	df2	Sig.
Addiction	Pre-test	0.04	1	48	0.82
	Post-test	0.04	1	48	0.80

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**Table 5.** Post-test analysis of covariance results of addiction scores after pre-test adjustment

Variables	SS	df	MS	F	Sig.	Eta
Pre-test	24.373	1	24.273	1.413	0.242	0.037
Group	4991.287	1	4991.287	289.383	0.001	0.887
Error	638.177	47	17.248			
Total	32615	50				



of stress, and raising awareness of the risks that adolescence might encounter. This finding is consistent with the findings of Zanjani and Sadeghi [16] who predicted addiction readiness based on mindfulness and emotional regulation in students, Oberle et al. [17] who assessed the effectiveness of emotional regulation training on attitude toward drugs in students, Kimber and Sandell [18] who predicted the attitudes toward drugs based on emotional regulation in students in Egypt, and Dehghani And Mesrabadi [14] who conducted a meta-analysis on the effectiveness of emotional and social skills training in the reduction of learners' addiction potential.

In explaining these findings, it can be said that many people develop addiction due to impaired emotional regulation and that drugs are used for modulating stressful emotions. The tendency for substance use stems from low levels of positive emotion regulation strategies and the inability to effectively manage emotions. When people are under pressure to use drugs, poor emotion management increases the risk of drug addiction. Conversely, effective emotion management reduces the risk of substance abuse. The ability to adjust emotions enables people to use coping strategies in situations where the risk of substance abuse is high [14].

Zanjani and Sadeghi showed that people with high levels of emotion regulation deficits were more likely to be involved in high-risk behaviors, including addiction. Those who have learned poor emotion regulation strategies may be more susceptible to using high-risk behaviors as a means to relieve negative emotions. Consequently, according to these researchers and the findings of the present study, emotion regulation is a factor in increasing the likelihood of individuals engaging in high-risk behaviors, including substance use [16].

Bahadori Khosroshahi [5] reported that emotion regulation strategies influence the intensity and tendency of addiction in adolescent learners. Risky behaviors are a maladaptive strategy in the face of stressful and negative

life situations. Regarding drug use, it seems that the main event that caused the negative mood is probably not addressed. When the person stops doing a risky behavior, he is prone to return to the negative state he was trying to escape. People who use traumatic behaviors, such as drug use to reduce their negative emotions are prone to be deterred from negative emotions and tendency to risk behavior and vice versa.

Gillman [19] considers emotion management as internal and external processes that are responsible for controlling, evaluating, and modifying the individual's emotional reactions in the pursuit of goals, and any deficiencies in the emotional skills can make the person vulnerable to addiction and behavioral problems. The Ability Model by Salovey [20] defined emotion regulation skills as the ability to identify or enter information and process it through the immediate manipulation of symbols as well as the ability to receive emotional information from visual and auditory stimuli. These skills are considered by these scholars as mental ability and they believe that cognitive and emotional structures interact. The ability to identify and understand emotions and reasoning through them and also the ability to feel emotions in ourselves and others determine each person's emotional skill [20]. Theorists believe that through emotion regulation training, people acquire the knowledge of self-awareness, being responsible, decision-making, communication, and the cause of the emotion, and gain information about the reason and how to be motivated in different situations. This ability to understand emotional experiences makes people able to better understand themselves in the environment and foster efficient regulation of emotions, self-management, and resilience, which is called emotional regulation literacy. Also, it is assumed that those attending emotional literacy courses experience less difficulty in areas, such as peer pressure, drug use, smoking, and addiction. This emotional and social ability makes them less resistant to the pressures and impulses of actions and discomfort in the future. Controlling social and emotional risk factors allows

the person to think and act better against environmental stimuli, and he can build stronger social support networks around them, pushing the individual away from social withdrawal, leading to more positive emotions, higher adaptability, and reduced readiness [21].

## 5. Conclusion

Overall, based on the findings of this study and other studies, the focus of emotion regulation training programs is to train and equip adolescents with a set of skills that will help them through their life; therefore, they will be productive in the community and will remain healthy. Also, with regard to the mechanism of the effects of emotion regulation programs, this factor may reduce internal and external problems and make adolescents able to deal with peer pressure or emotional and social attractions leading to addiction.

One of the limitations of the present study was that it was impossible to assess female adolescent learners for various reasons and the study was conducted on first-grade male students. Considering the role of gender in future studies is suggested. Also, given that the principle of "the sooner the better" is commonplace in preventive research, such interventions and training are recommended for those studying in elementary schools, when the personality is developing.

## Ethical Considerations

### Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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### Authors' contributions

Study design: Ramin Habibi-Kaleybar; Data collection and analysis: Both authors; Manuscript preparation: Ramin Habibi-Kaleybar.

## Conflict of interest

The authors declared no conflict of interests.

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